

A Geoduck Distribution and Abundance Survey in the Central Basin of Puget Sound

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Abstract

King County is planning a new regional wastewater treatment facility that will require construction of a marine outfall located in the Central Basin of Puget Sound. Extensive oceanography, geophysics, water quality, habitat, and biological resource studies have been conducted in the candidate marine outfall zones. Due to the regional importance of geoducks as a commercial resource, a geoduck density, distribution, and biomass survey was performed. The geoduck survey was conducted in April and May 2002. The survey area included approximately 11.3 kilometers of shoreline, at depths between approximately -1.2 to -21.3 meters referenced to Mean Lower Low Water. Almost 6,000 meters of transect lines, placed perpendicular to the shoreline, were surveyed by SCUBA divers. Along with the measurement of density, distribution, and biomass, samples were collected for tissue chemistry and age analysis, as well as for commercial grading. The survey indicated that geoduck population density increased with depth and was highest at the deepest depths sampled. In contrast, individual geoduck biomasses were higher in the shallower depths and decreased significantly with depth. Survey data indicated that geoducks were ubiquitous throughout the study area, between the lower edge of eelgrass habitat and the deepest sampling depth.